

**Cleveland State Community College**

2021 Governor's Investment in Technical Education (GIVE 2.0)

ASAP: Advanced Studies at PIE - Cleveland State Community

College IN PARTNERSHIP WITH

1. **Economic Agency:** Cleveland-Bradley Chamber of Commerce, Southeast Tennessee  
Development District, Cleveland Associated Industries
2. **Local Education Agencies:** Bradley County School District, Polk County School  
District, Meigs County School District
3. **Employer Partners:** Olin Corporation, Wacker Chemie AG,
4. **Additional Partners:** McKee Foods, Mars, Sigura, Cormetech

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Funding Requested: \$ \$794,996.53

**Dr. Bill Seymour, CLSCC President**



**Karen Wyrick, Dean STEM**



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## **Program Abstract**

Cleveland State Community College (CLSCC), in collaboration with the Partners in Industry and Education Innovation Center (PIE), proposes to establish a Chemical Engineering Technology, Associate of Applied Science (AAS) Program of Study to serve the manufacturing industries within the Southeast Region of Tennessee.

The PIE Innovation Center, a 288,000 square foot facility, will create an innovative student experience through collaboration with secondary, postsecondary, business, industry, and nonprofit organizations changing learning pathways, providing experiential learning in STEM, embedded work-based learning experiences, and the promotion of design thinking. The PIE Center design allows three K-12 districts (Bradley, Meigs, Polk), postsecondary, businesses, industries, and nonprofits to be housed together. Therefore, breaking down barriers of location, transportation, and multiple costs of programming through shared resources. As the need for a skilled workforce and Ready Graduates (See appendix G) continue to grow, Advanced Studies at PIE will address education, workforce development, and the needs of the whole child through redefining time, space, partnerships, and modes of learning.

Governor Bill Lee appointed \$1 million, and the Bradley County Board of Education approved \$1.3 million for the Regional PIE Center Project to break ground in March 2019. Continued work with the Bradley County Commission led to the purchase of the site and construction for the PIE project with an additional \$12 million. Local, state, and federal government funding, as well as private donations, have been given to begin the development of the PIE Innovation Center.

## ASAP: Advanced Studies at PIE

Bradley County Schools successfully received the Innovative High School Model grant in May 2021, which will run concurrently with this GIVE 2.0 grant. The funds from GIVE 2.0 will only strengthen and deepen the impact within the community, providing the funding for the development and implementation of the Advanced Studies at PIE (ASAP) Chemical Engineering Technology, AAS Program of Study.

## **Section 1. Demonstration of Need**

Located within CLSCC's service region, PIE partners with Bradley, Meigs, and Polk County School Districts to foster a place for students to learn from local industries, businesses, and nonprofits. All three school districts are located in counties that fall within the Appalachian Regional Commission (ARC) as well as Cleveland State's five-county service area. According to ARC FY 2021 economic classification, Meigs County is considered At-Risk, while Bradley County and Polk County are categorized as Transitional (ARC, 2021). In the June 2021 Labor Force Estimates report, Meigs County has an unemployment rate of 5.2 percent, above Tennessee's average of 4.7 percent. Bradley and Polk Counties are not falling far behind, with 4.5 and 4.6 percent, respectively (TN DOL, 2021). Furthermore, all three counties in the service area where PIE and CLSCC operate have a higher percentage of their citizens living in poverty than the statewide average of 11.1 percent. Bradley, Meigs, and Polk County are falling below the average annual wage in the manufacturing industry compared to the statewide average (THEC, 2021).

In the Southeast Tennessee Development (SETD) 2021 Annual Update, the ten-year forecast predicts that there will be 565 workers needed to replace retirees and meet projected growth in the region (SETD, 2021). With manufacturing as one of the top industries and a rapidly growing occupation, the need for chemical engineers and technicians in the greater Cleveland area will continue to grow. However, with an aging population and no clear learning pathway between educator and employer, it will continue to be a challenge to engage students who live in counties that fall above the state average in unemployment, poverty, and low-wage jobs.

CLSCC proposes a solution to addressing these critical needs with the creation of a new Chemical Engineering Technology, AAS degree to be implemented as part of the Advanced

Studies at PIE program. This proposed program will be an extension of the existing programs offered at PIE, embedding work-based learning experiences into students' curriculum.

In the new Chemical Engineering Technology, AAS degree program, CLSCC proposes a hands-on learning experience to develop new learning pathways for students. This program is designed for students interested in working as an operator or process technician in a manufacturing facility. The focus of the ASAP program will be to recruit and diversify participation for trainees that are historically underrepresented in chemical engineering technology professions, including females and minorities.

### ***Alignment of Drive to 55 Goals***

The proposed ASAP program will support the Drive to 55 campaign to increase the number of Tennesseans with postsecondary credentials to 55 percent by 2025. The gap will close between business/industry and education through the perfect combination of revolutionary high school training, post-secondary/college-bearing courses, industry credentialing, and workforce development skills. As a result, the region will have more college and career-ready students. According to the Drive to 55 Pathways to Postsecondary Report, students engaged in Early Postsecondary Opportunities (EPSOs) are more likely to enroll seamlessly into postsecondary programs and succeed in programming after high school. Expanding upon the already existing Advanced Manufacturing at PIE, a Chemical Engineering Technology, AAS program will provide dual credit, dual enrollment, and industry certifications to our students. In addition to being exposed to college coursework, students will have the opportunity to earn a college degree while still in high school.

### ***Localized Data Demonstrating the Need for Action***

Bradley County Schools hosted a PIE Lunch-and-Learn on September 4, 2019. Seventy-six regional partner representatives attended and evaluated goals for the program development for PIE. In additional PIE Product team meetings, local manufacturers identified chemical technologies as a skills gap. Industrial Engineering Technologists and Technicians are listed as high employer demand for the Southeast. (CERT, 2020). According to Jobs4tn.org Chemical Technicians are in demand with low supply, the typical wage of \$49,572 and represent 10% of the life sciences positions with the Southeast being the region with the largest demand.

### ***Clear Linkages Between Grant Activities and Local Needs***

ASAP grant activities are developed and focused directly on workforce training needs with local industries. Strong input had driven this grant activities and funding requests as outlined throughout the grant and indicated in the MOUs.

## **Section 2. Program Plan**

### ***Program Design***

CLSCC is proposing to develop the Chemical Engineering Technology, Associate of Applied Science degree to be implemented in Fall 2022 at PIE. This degree program will be contained in the Advanced Technologies Department within the STEM Division of the college. Although students at PIE will begin dual enrolling in Chemical Technology courses in Fall 2022, preparation for program development will begin in January 2022. The curriculum for the Chemical Engineering Technology, AAS degree will require 61 semester credit hours, consisting of five general education courses, four required core courses named in the Tennessee Board of Regents library, and the remaining courses selected from the Chemical Engineering Technology Course Library, which were selected based on feedback from local industry and stakeholders. Please see Appendix G for the full curriculum.



Eligible high school students will begin taking classes during their junior or senior year. The instructor for the Chemical Engineering Technology courses will be a CLSCC faculty member, however, the courses will be delivered in the STEM CORE of PIE. Funding for the instructor for the first 18 months has been secured by another grant (Phases I and II). CLSCC is asking for funding to secure this faculty position for the second year of implementation (Phase III). A classroom set of textbooks to be used by the dual enrollment students will be purchased through this grant. This will allow the books to be used for years rather than having to require high school students to purchase them each year.

### ***Detailed Timeline and Overview***

The table below provides an overview of the three phases which comprise the Chemical Engineering Technology AAS program timeline. A monthly timeline and overview which includes development and implementation details are provided in Appendix B.

<b>Phase</b>	<b>Program Activities</b>	<b>Project Milestones</b>
<b>Phase I</b>  <b>November</b>  <b>2021 –</b>  <b>August 2022</b>	<ul style="list-style-type: none"> <li>-Creation of Marketing materials for community outreach.</li> <li>-Alignment of high school and postsecondary scheduling, recruitment, and registering of students.</li> <li>-Development of the Program of Study faculty, curriculum, mentorship, and WBL partnerships.</li> <li>-Purchase equipment, textbooks, and supplies needed for year one.</li> <li>-Provide professional development and externships for high school and college faculty.</li> </ul>	<ul style="list-style-type: none"> <li>-All Marketing Materials and Community Outreach for recruitment (program awareness inserts and brochures, promotional video, website, newsletters, mailings, etc.) by January 2022 and continue throughout the grant period.</li> <li>-The Master Schedule will be developed in the fall of 2021.</li> <li>-Regional high school students will begin registering for the Chemical Engineering Technology Program in January 2022, with CLSCC Registration beginning in March 2022.</li> <li>-Program Aspects developed by December with ongoing development through the grant period.</li> <li>-Start purchasing equipment and supplies in November 2021- July 2022.</li> </ul>

		-Work with The Evaluation Group to develop an evaluation plan and begin data collection
<b>Phase II</b>  <b>August 2022</b>  <b>– August 2023</b>	-Begin classes at PIE. -Work with partners to access and adjust the program as needed. -Present Program of Study at K-12 Schools continued marketing and student recruitment for the next cohort. -Purchase equipment, textbooks, and supplies needed for year two	-Chemical Engineering Technology classes will begin in August 2022 -Ongoing partner collaboration for program development throughout the grant period. -Execute recruitment/marketing plan for the second cohort of students that will register in January 2023. -Start purchasing equipment, textbooks, and supplies in August 2022. -The Evaluation Group continues to collect data and provides reports of progress.
<b>Phase III</b>  <b>August 2023</b>  <b>– April 2024</b>	-Begin year two classes, continue year one classes. -Continued marketing recruitment -Evaluate Program of Study	-The second Chemical Engineering Technology Cohort will begin at PIE in August 2023. -The Evaluation Group completes data collection and develops a final evaluation report.

***Clear Alignment of Workforce Data and Drive to 55 Goals***

The ASAP at PIE Chemical Engineering Technology Program supports the TNECD Chemical priority industry cluster (CERT), incorporates Work Ethic Distinction components, and Early Postsecondary Opportunities to meet the Drive to 55 goals. Students within the secondary to the postsecondary program will have the opportunity to earn dual credits through Microsoft Office Specialist Certifications for INFS 1010 Computer Applications and dual enrollment credits through the general core, chemistry, and chemistry technology courses. Students may also earn industry credentials in OSHA 10 and Lean Production Processes linked to industry.

***Measurable Objectives for Each Phase of the Project***

Program Objective 1. **Number of certified educators.** Increase the number of postsecondary faculty and high school teachers who earn chemical lab safety certifications. Timeline: at least 10

certified by August 2022; an additional 10 by August 2023, and an additional 10 by August 2024.

Program Objective 2: **Number of externships provided.** Increase the number of externships available to educators. Timeline: at least five externships offered by August 2022; five between September 2022 and August 2023, and five between September 2023 and August 2024, for a total of fifteen.

Program Objective 3: **Number of students enrolled in the program.** Increase the number of students enrolled in the Chemical Engineering Technology, AAS program. Timeline: at least fifteen students enrolled for the 2022-23 school year, and an additional 15 students enrolled for the 2023-24 school year.

Program Objective 4: **Number of post-secondary credits earned.** Increase the number of postsecondary credits earned by participating students. Timeline: each participating student will earn at least 12 post-secondary credits in each of the 2022-23 and 2023-24 school years.

Program Objective 5: **Number of Work-Based Learning and Career Awareness activities provided.** Increase the number of opportunities along the WBL-continuum offered to Grade 5 – 12 students with at least ten students participating at each event. Timeline: eight activities offered by August 2022; ten activities offered during the 2022-23 school year; twelve activities offered during the 2023-24 school year.

Program Objective 6: **Industry credentials earned.** Increase the percentage of students earning industry credentials. Timeline: at least 50% of participating students will earn at least one industry credential during the 2022-23 school year; at least 75% will earn at least 2 industry credentials during the 2023-24 school year.

<b>Phase</b>	<b>Objective 1 Certified Instructors</b>	<b>Objective 2 Externships Provided</b>	<b>Objective 3 Course Enrollment</b>	<b>Objective 4 Postsecondary Credits</b>	<b>Objective 5 WBL Continuum</b>	<b>Objective 6 Industry Credentials</b>
<b>Phase I Spring 2022</b>	10	5	Recruitment	0	10 activities with at least 10 students	0
<b>Phase II 2023-2024</b>	10	5	15 high school and postsecondary students	12 credits per participant	10 activities with at least 10 students	50% earn at least 1 credential
<b>Phase III 2023-2024</b>	10	5	30 high school and postsecondary students	12 credits per participant	12 activities with at least 10 students	75% earn at least 2 credentials

***Recruitment of Underrepresented Student Groups Chemical Engineering Technology Program***

The program directors and ASAP leadership will work with the economic agencies and local education agencies to recruit program participation for student groups that are historically underrepresented in Chemical Engineering Technology programs, including females and minorities. Economic agencies will assist with the dissemination of ASAP program opportunities and benefits to citizens throughout Bradley, Meigs, and Polk Counties.

The average of the Free & Reduced Lunch percentage is 52.8% for the participating high schools in this proposal, Bradley County 53.85 (Bradley Central High School 68.18% and Walker Valley High School 39.51%), Meigs County 51.10%, and Polk County 52.57% with WBL enrollment at Bradley County 56.4%, Meigs County 19.7% , and Polk County 11% . Concentrated focus on the economically disadvantaged students will have the most positive impact by breaking down barriers and providing equity and access. In addition, students with race diversity overlap into the economically disadvantaged group.

***Project Governance and Accountability Plan***

The ASAP Leadership Team consisting of the CLSCC STEM Dean, Chemistry Instructor, PIE Project Director, and BCS CTE Director will be responsible for establishing and coordinating the day-to-day implementation of the grant. The ASAP Leadership Team will establish quarterly meetings with PIE Chemical Engineering Technology Advisory Council including industry partners, economic agencies, and local education agencies to ensure collaborative dialogue for continued improvement of curriculum, processes, and program recruitment and retention. Quarterly communication will be shared with all stakeholders in order to maintain accountability, obtain input, and provide feedback opportunities as the program is developed. During quarterly meetings with the assistance of The Evaluation Group, the ASAP Leadership Team will assess progress, challenges, and develop innovative solutions to ensure the success of the grant.

### ***Structure of the Work-Based Learning Program***

#### **Structure of the Program**

The PIE Innovation Center's Work-Based Learning (WBL) program will follow the State of Tennessee's WBL Continuum. Students will begin with Chemical Engineering Technology exploration activities in elementary and middle school. Career Awareness in elementary school will include guest speakers from industry partners and chemistry experiments on the PIE to GO STEM Bus. Continued exploration activities in middle school will include interest and aptitude assessments, PIE to Go STEM Bus projects, career fair experiences, and PIE chemistry lab tours. High school students will become more immersed in the WBL activities. Students will receive mentors from industry partners and participate in relevant project-based learning activities prior to and while enrolled in the Dual Enrollment Chemical Engineering Technology classes. Industry partners will provide job shadowing opportunities when allowed by the company.

Industry partners will work with the high school WBL teachers to develop a list of transferable skills required for the chemical field and develop Personalized Learning Plans. Industry partners will participate in senior interviews with those students in the Chemical Engineering Technology focus area.

Full WBL immersion will take place when students graduate high school and are enrolled in the program through CLSCC. Students will have the opportunity to participate in internships through the Advanced Technologies Institute (ATI) and the CHET 2490 Internship course. ATI faculty work closely with GIVE 2.0 leadership and industry partners to align the new program of study with job-related skills, and high-impact practices such as service-learning, leadership training, and capstone projects integrated into the ASAP curriculum. To increase the strength of the chemical lab instruction, promote relevant application of industry standards, and align curriculum with industry needs, high school and postsecondary faculty will participate in industry externships.

### **Section 3. Strength of Partnerships**

The successful implementation of the ASAP programming will be the depth of partnerships between local education agencies, industry partners, economic agencies and Cleveland State Community College. The strength of our partnerships is relationships built over time. Identified partners serve on Cleveland State's Advanced Technologies Council, high school CTE STEM Program of Study, and on PIE Development teams for curriculum, program, equipment, space design, student WBL experiences, industry certifications, and early postsecondary opportunities. A shared vision and overview of the chemical engineering technology program and the roles and responsibilities of each partner are outlined see Appendices D-F.

#### ***Detailed Description of Each Partner's Role***

**Local Education Agencies (LEA's)** will collaborate with CLSCC and industry partners to develop and sustain a new Chemical Engineering Technology Program located at PIE. The collaboration will expand a specialized STEM Program of Study, dual credit, and dual enrollment opportunities for students at Bradley Central High School, Walker Valley High School, Polk County High School, Copper Basin High School, and Meigs County High School. Career coaches and counselors will work with the ASAP Program Coordinator and Cleveland State Enrollment Services on student recruitment, scheduling, and logistics. The partnerships between CLSCC and the high schools are critical to the success of ASAP.

**Industry Partners**, Wacker, Olin, McKee Foods, Sigura and Cormetech, in the Advanced Studies at PIE program will serve as advisors and provide meaningful work-based learning/ career awareness opportunities, mentoring, program/curriculum development and evaluation, industry-based projects, and input on safety and equipment. Industry partners will provide internships through the ATI, teacher externships, and work closely with the ASAP Program Coordinator and Instructor.

**Economic Agencies**, Cleveland/Bradley Chamber of Commerce, Cleveland Associated Industries, and Southeast Development District, will actively participate in ASAP by assisting with the identification of local industry needs. Three economic agencies in the CLSCC service region will work with ASAP and local high school CTE to promote industry awareness, provide industry-related projects, recruitment of program participants and leaders to communicate the benefits and outcomes of the program to attract new industry partners and program participants.

**CLSCC** will work with senior higher education to provide additional opportunities for ASAP students. Articulation agreements are currently in place with Middle Tennessee State University and the University of Tennessee at Chattanooga for programs within the Advanced Technologies



Department. CLSCC leadership will continue to work with local universities to create similar agreements for ASAP. Please see appendix G for articulation agreements.

***Capabilities of Each Partner to Ensure Success:*** Partner commitments support the objectives in this grant. CLSCC has a proven track record of successful implementation of workforce training programs within the Advanced Technologies Department. PIE is experienced in collaborating with industries and economic agencies. This experience is critical to successfully implement this new program of study. The partnership team will meet quarterly to provide operational guidance during program development and create a sustainability plan. Well-defined roles and unique strengths for each partner are outlined in the attached MOUs.

***MOU or Letters of Support from Economic Agencies, Industry Partners, and LEAs***

MOUs and letters of support from economic agencies, industry partners, and LEAs have been received, and are located in Appendices D, E, and F, respectively.

**Section 4. Budget Plan**

All of the expenditures listed in the budget in Appendix A directly support the grant activities and outcomes, as outlined by line items below. Over eighty-five percent of the budget is tied to ASAP personnel and equipment.

***Clear Alignment Between Funding Requests and Grant Activities***

**Line Items 1-2: Personnel** is extremely important to the success of this ASAP program.

-One chemistry/chemical engineering faculty position will be hired to support ASAP. The overall cost to fund this instructor's salary (including benefits and taxes) for 12 months out of the 30-month grant period will be \$ 84,970.

-One part-time laboratory technician to be hired in Phase II of the grant timeline. This position will be responsible for training, lab maintenance including instruments, set-up for chemical



experiments and implementation, and maintaining a safe atmosphere in the labs. The overall cost to fund this tech's salary for 12 months out of the 30-month grant period will be **\$21,530** (including taxes).

-One chemical laboratory safety officer will be hired in Phase I of the grant for employment beginning June 2022. This position will be responsible for overall lab safety, safety planning, waste management, compliance with OSHA standards, and overseeing safety components of all labs at Cleveland State and the Chemistry Lab at PIE. The overall cost to fund this salary for 23 months will be **\$125,848** (including benefits and taxes).

Fifteen Teachers will participate in externships at \$750.00 each for a total of **\$11,250.00**.

The total for line items 1 and 2 is **\$243,598.00**.

Line Items 4: Contingent upon the grant being awarded, CLSCC will hire The Evaluation Group (TEG) to be the ASAP program's external evaluator. CLSCC will pay TEG 10% of the overall grant award to conduct the evaluation which if awarded in full will be **\$72,272.41**. Please see the sustainability section and Appendix H for further details.

Line Item 5:

- Supplies are vital in the overall implementation. Office and computer supplies, presentation materials, copying, and printing are a necessity. **\$8,500.00**.

- Hosting parent engagement events, recruitment open houses, PD conferences, and advisory council meetings, catering services are needed. **\$7,000.00**.

- The WBL continuum will be supported through the People Grove Mentoring Platform, TransFR VR, and a module on PIE to Go STEM Bus. **\$80,500.00**.

Technology supplies needed to implement and sustain the ASAP program are a laptop for the instructor, 10 computers for the instrumentation room, and Chemical Engineering Technology Software. **\$31,000.00.**

- The lab equipment and chemical supply purchases are critical to the implementation of the Chemical Engineering Technology Program **\$120,000.00.** (See Chart Appendix G).

Line Item 7: In order to support the overall implementation of the program, postage is needed for marketing and informational materials. **\$3,000.00.**

Line Item 10: A classroom set of textbooks purchased by the grant will allow sustainability by eliminating the need for students to pay out of pocket each semester for their books. **\$30,000.**

Line Item 11: Travel will include grant staff local travel, fuel costs in transporting students from participating high schools allowing equity and access. **\$12,000.00.**

Line Item 12: Conferences to support, collaborate, plan and sustain the new Chemical Engineering Technology Program will equip teachers and staff with knowledge of up-to-date innovative strategies. CLSCC/LEAs will host professional development events and training for the lab safety officer, chemistry instructors, lab technicians, and others. The costs associated with professional development, conferences, and meetings will be **\$32,000.00.**

Line Item 18: To increase awareness/branding, enrollment, and retention in the new Chemical Engineering Technology Program, we will contract with a marketing firm to develop a strategic marketing plan to disseminate key program materials including promotional videos and various print materials for students and parents. Additionally, students will receive industry credentials in OSHA 10 and OSHA Lab Safety. The costs related to advertising and testing fees will be **\$27,250.00** for 30 months.

Line Item 19: Lab equipment in capital purchases are a necessity in order to develop and sustain a new program. The equipment purchases include a Constant Temperature Water Bath- \$19,610.00, Introduction to Process Engineering- \$19,342.00, and a Gas Chromatography (Automatic Sampler)- \$5,000.00. **\$43,952.00.**

Line Item 22: CLSCC is requesting indirect costs of eight percent for a total of **\$53,535.12.**

These costs may be incurred for purposes not readily identifiable with a specific cost objective, such as HR or accounting.

Line Item 25: ASAP Proposed Budget Total=**\$794,996.53**

### **Section 5. Sustainability**

#### ***Plan for Sustaining the Program Beyond 30 Months***

CLSCC leadership is fully committed to the continuance of the ASAP program beyond the GIVE grant period of 30 months as evidenced through our MOUs. This commitment includes the continuation of the Chemical Engineering Technology, AAS program at PIE by supporting a full-time faculty member to teach the courses, a part-time lab technician including laboratory safety, providing dual enrollment and dual credit opportunities for the high school students, and continued supporting the WBL activities.

#### ***Detailed Plan for Maintaining Communication and Sharing Resources***

The Evaluation Group (TEG), with more than 30 years of demonstrated experience in planning, implementing, and evaluating federal and state grant programs, will serve as the external evaluator for ASAP. TEG's capacity to conduct a rigorous, objective evaluation makes them highly qualified to serve as our external evaluator. Guided by our SMART goals, TEG will utilize a continuous feedback loop to provide ongoing, timely, and useful information for decision-making on needed program modifications and to plan for sustainability.

To support replication in other settings, our process evaluation will examine implementation fidelity for all program components. Fidelity of implementation will be conducted longitudinally by systematically tracking, documenting, and assessing the extent to which the actual implementation of the program aligns with implementation protocol and addresses proposed targets. Findings will be communicated via quarterly, mid-year, and end-of-year summative reports. Survey briefs and snapshots will present program findings in an easy-to-read form for varied audiences. Successes, lessons learned, and resources will be available to aid in replication.

## **Section 6. Economic Status Acknowledgement**

### ***Identification of one At-Risk County***

According to the Appalachian Regional Commission (ARC) FY 2021 economic classification, Meigs County is At-Risk, while Polk County is Transitional (ARC, 2021). The Cleveland-Bradley County Chamber of Commerce, Southeast Tennessee Development District, and Cleveland Associated Industries have agreed to support the ASAP program and assist with identifying local industry needs.

# Appendix A

## Grant Budget

**Appendix A****Budget Detail**

Institution: Cleveland State Community College GIVE Program Competitive Grant				
The grant budget line-item amounts below shall be applicable only to expenses incurred during the following applicable period: BEGIN: November 15, 2021 END: May 15, 2024				
POLICY 03 Object Line-Item Reference	EXPENSE OBJECT LINE-ITEM CATEGORY 1	Grant Contract	Grantee Participation	TOTAL PROJECT
1,2	Salaries, Benefits & Taxes	\$243,598.00		\$243,598.0
4,15	Professional Fee, Grant & Award 2	\$72,272.41	0.00	\$72,272.41
5, 6, 7, 8, 9, 10	Supplies, Telephone, Postage & Shipping, Occupancy, Equipment Rental & Maintenance, Printing & Publications	\$310,389.00	0.00	\$310,389.00
11, 12	Travel, Conferences & Meetings	\$44,000.00	0.00	\$44,000.00
13	Interest 2	0.00	0.00	0.00
14	Insurance	0.00	0.00	0.00
16	Specific Assistance to Individuals	0.00	0.00	0.00
17	Depreciation 2	0.00	0.00	0.00
18	Other Non-Personnel 2	\$27,250.00	0.00	\$27,2500.0
20	Capital Purchase 2	\$43,952.00	0.00	\$43,952.00
22	Indirect Cost	\$53,535.12	0.00	\$53,535.12
24	In-Kind Expense	0.00	0.00	0.00
25	<b>Grand Total</b>	<b>\$794,996.53</b>	<b>\$ -</b>	<b>\$794,996.53</b>

# Appendix B:

## Monthly Timeline Details

**Appendix B: Monthly Timeline Details****Monthly Timeline October 1, 2022 – April 30, 2024**

Month	Activity	Partners	Measurable Objectives	Program Objectives
<b>Fall 2021</b>				
October 2021	Approval of GIVE Grant by THEC	CLSCC	Notified via email by THEC	
	Collaborate with LEAs to develop a master schedule that includes the Chemical Engineering Technology Program of Study.	CLSCC and LEAs	The master schedule will be complete and students can register for classes in early February.	3, 4
November 2021	Hire the Chemistry/Chemical Engineering Technology Faculty.	CLSCC	The faculty member will go through new hire training and will begin training and development of the new program.	1,3,4
	Hold initial GIVE 2.0 Committee meeting. Meetings will take place quarterly throughout the grant.	CLSCC, LEAs, industry partners, and stakeholders.	The attendee list will be collected and minutes will be kept. Updated report of actions and outcomes every semester to be sent to THEC and all GIVE 2.0 Partners.	3,4,5,6
December 2021	Reflection/Planning meetings with the new teacher, grant coordinators, and industry partners.	CLSCC, LEAs, and industry partners	Next steps and assigned roles will be established for continued grant activities. Minutes from the meeting can be provided.	1,2,3,4,5,6
	Begin creating marketing materials for community outreach and recruitment.	CLSCC and LEAs	Marketing items pushed out by the end of January 2022.	3
	Finalize programming and solidify equipment needs.	CLSCC, Industry Partners, and LEAs	Program and equipment needs are to be completed in order to begin ordering equipment in January. Meeting minutes and sign-in sheets document.	3,4
	Work with People Grove (Online Mentoring Platform) to design and recruit industry partners and identify students. The mentoring is	CLSCC, LEAs, Industry Partners and	Pull reports and usage. Survey students and mentors for results and satisfaction.	5



	ongoing throughout the grant period.	Economic Agencies		
<b>Spring 2022</b>				
January 2022	Begin purchasing equipment for summer delivery.	CLSCC and LEAs	Purchase Requisitions will be available for all equipment ordered. Equipment will be ready to install in the summer of 2022.	3,4
	Elementary Students will begin WBL career exploration activities in Chemical Technology through STEM Bus.	LEAs	Track each elementary school visited and the	5
	Marketing Materials will be complete and recruitment for the new program will begin.	CLSCC and LEAs	Track effectiveness through the number of students signed up.	3,4,6
	The CLSCC faculty member will begin.	CLSCC	Curriculum, equipment, labs established.	1,3,4
February 2022	Students in area high schools and CLSCC will begin registering for August 2022 classes in the Chemistry Engineering Technology program.	LEAs and CLSCC	Intro level courses in 2022 will be rostered.	3
	Hold GIVE 2.0 Committee Advisory Council meeting.	CLSCC, LEAs, Industry Partners, and Economic Agencies	The attendee list will be collected and minutes will be kept.	3,4,5,6
March 2022	Recruitment for industries and teachers begins for the summer externship program.	LEAs, CLSCC, and Industry Partners	Companies and teachers will sign up for externships. Attendance will be tracked and reflection documents	1,2

ASAP: Advanced Studies at PIE

			will be required to receive a stipend.	
	Middle School Students will take Career Exposure Field Trips.	LEAs and CLSCC	Track the number of students that participate and review the students' reflection activity.	5
April 2022	Senior Interviews with industry professionals at participating high schools.	LEAs, CLSCC, and Economic Agencies	Track the number of students and industry professionals that participate and assess quality through score sheets.	5
May 2022	Registered Students for the Chemical Engineering Technology Program will tour the new PIE Center.	LEAs and CLSCC	Track the number of participants through the attendee list.	3,4,5,6
	Final planning for summer activities and opening of new facilities and programs.	LEAs, CSCC, Industry Partners and Economic Agencies	Itinerary, plans, and activities documented.	1,2,3,4,5,6
	Hold GIVE 2.0 Committee Advisory Council meeting.	CLSCC, LEAs, Industry Partners, and Economic Agencies	The attendee list will be collected and minutes will be kept.	3,4,5,6
<b>Summer 2022</b>				
June 2022	High school and postsecondary teachers will participate in teacher externships	LEAs, CLSCC, Industry Partners and Economic Agencies	Attendance tracked and surveys will be conducted on teachers and externship hosts.	1,2
	Specialized training for teachers	LEAs, CLSCC	Teachers will receive completion credentials and pertinent certifications.	1
	Hire Chemical Laboratory Safety Officer	CLSCC	New hire onboarding process and required training complete.	1

ASAP: Advanced Studies at PIE

July 2022	Equipment procured and installed in the Chemical Engineering Technology Lab at the PIE Innovation Center	LEA (Bradley County Schools), CLSCC	POs fulfilled and equipment delivered by end of July 2020.	3,4
<b>Fall 2022</b>				
August 2022	Classes will begin for year 1 students	CLSCC and LEAs	Chemical Engineering Technology classes will be held on scheduled days (M, T, W, R)	3,4,6
	Hold GIVE 2.0 Committee Advisory Council meeting.	CLSCC, LEAs, Industry Partners, and Economic Agencies.	The attendee List will be collected and minutes will be kept.	3,4,5,6
	Elementary and middle school students will have WBL career exploration activities in Chemical Technology through STEM Bus.	LEAs	Track each elementary school visited and the number of students that participated. The STEM Bus will travel to elementary and middle schools for a week at a time. This is ongoing throughout the grant period.	3,5
September 2022	Hold a professional development conference for local industry. Invite speakers and presenters that will cover local industry needs. Host tours of the new facility.	CLSCC, LEAs, Industry Partners, and Economic Agencies	The attendee list will be tracked and a survey will be conducted at the end of the training.	1,5
October 2022	Participate in Manufacturing Day with CAI and Industry Partners.	CSCC, LEAs, Industry Partners and Education Agencies	Students complete a “real world” project paired with industry partners. They present projects to the industry leadership teams.	5
	Collaboration on 2023-2024 master schedules with LEAs and postsecondary.	CSCC, and LEAs	Master Schedule complete and students will be ready to register for classes in January.	3,4
	Middle School Students will take Career Exposure Field Trips.	LEAs and CLSCC	Track the number of students that participate and review the students’ reflection activity.	5

ASAP: Advanced Studies at PIE

November 2022	Hold GIVE 2.0 Committee Advisory Council meeting.	CLSCC, LEAs, Industry Partners, and Economic Agencies.	The attendee list will be collected and minutes will be kept.	3,4,5,6
	Job Shadowing for Juniors through the Cleveland Chamber	CLSCC, LEAs, and Economic Agencies	Participation and satisfaction surveys	5
December 2022	End of semester meetings between postsecondary and LEAs.	CLSCC and LEAs	Planning meetings for scheduling of classes.	2,3,4,5,6
<b>Spring 2023</b>				
January 2023	Students begin registering for the second year of Chemical Engineering Technology Classes.	CLSCC and LEAs	Roster development.	3,4
February 2023	Chemical Engineering Technology Open House for students, parents, and community.	CLSCC, LEAs, and Industry Partners	Attendee Sign-In Sheet	3,4,5
	Hold GIVE 2.0 Committee Advisory Council meeting.	CLSCC, LEAs, Industry Partners, and Economic Agencies.	The attendee list will be collected and minutes will be kept.	3,4,5,6
March 2023	Middle School Students will take Career Exposure Field Trips.	LEAs and CLSCC	Track the number of students that participate and review the students' reflection activity.	5
April 2023	Senior Interviews with Industry Professionals to be held at the PIE Center.	CLSCC, LEAs, and Industry Partners	Track the number of students and industry professionals that participate and assess quality through score sheets.	5
May 2023	Job search for a part-time lab tech position.	CLSCC	The person is hired, trained, and ready to start in August.	1

	Hold GIVE 2.0 Committee Advisory Council meeting.	CLSCC, LEAs, Industry Partners, and Economic Agencies.	The attendee list will be collected and minutes will be kept.	3,4,5,6
<b>Summer 2023</b>				
June 2023	High school and postsecondary teachers will participate in teacher externships.	LEAs, CLSCC, Industry Partners and Economic Agencies	Attendance tracked and surveys will be conducted on teachers and externship hosts.	1,2
July 2023	Professional development opportunities for postsecondary and high school teachers.	CLSCC, LEAs	Attendance tracked and surveys will be conducted for teachers.	1
<b>Fall 2023</b>				
August 2023	Classes will resume for year two students and begin for the second cohort of year one students.	CLSCC and LEAs	Chemical Engineering Technology classes will be held on scheduled days (M, T, W, R)	3,4
	Part-time lab tech position begins.	CLSCC	Lab	1
	Elementary and middle school students will have WBL career exploration activities in Chemical Technology through STEM Bus.	LEAs	Track each elementary school visited and the number of students that participated. The STEM Bus will travel to elementary and middle schools for a week at a time. This is ongoing throughout the grant period.	5
	Hold GIVE 2.0 Committee Advisory Council meeting.	CLSCC, LEAs, Industry Partners, and Economic Agencies.	The attendee list will be collected and minutes will be kept.	3,4,5,6
<b>September 2023</b>				
October 2023	Middle School Students will take Career Exposure Field Trips.	LEAs and CLSCC	Track the number of students that participate and review	5

			the students' reflection activity.	
	Participate in Manufacturing Day with CAI and Industry Partners.	CSCC, LEAs, Industry Partners and Education Agencies	Students complete a "real world" project paired with industry partners. They present projects to the industry leadership teams.	5
November 2023	Job Shadowing for Juniors through the Cleveland Chamber.	CLSCC, LEAs, and Economic Agencies	Participation and satisfaction surveys	5
	Hold GIVE 2.0 Committee Advisory Council meeting.	CLSCC, LEAs, Industry Partners, and Economic Agencies.	The attendee list will be collected and minutes will be kept.	3,4,5,6
December 2023	End of semester meetings between postsecondary and LEAs.	CLSCC and LEAs	Planning meetings for scheduling of classes	1,2, 3,4,5,6
<b>Spring 2024</b>				
January 2024	Students begin registering for the second year of Chemical Engineering Technology Classes.	CLSCC and LEAs	Roster development.	3,4
February 2024	Hold GIVE 2.0 Committee Advisory Council meeting.	CLSCC, LEAs, Industry Partners, and Economic Agencies.	The attendee list will be collected and minutes will be kept.	3,4,5,6
March 2024	Middle School Students will take Career Exposure Field Trips.	LEAs and CLSCC	Track the number of students that participate and review the students' reflection activity.	5
April 2024	Hold Final GIVE 2.0 Committee Advisory Council meeting.	CLSCC, LEAs, Industry Partners,	The attendee list will be collected and minutes will be kept.	3,4,5,6

		and Economic Agencies.		
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# Appendix C:

# Bibliography



## **Appendix C: Bibliography**

### **Bibliography**

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# Appendix D: MOUs and Letters of Support from Economic Agencies

**Memorandum of Understanding (MOU)**  
**Between**  
**Cleveland State Community College**  
**and**  
**Cleveland-Bradley Chamber of Commerce**

**I. Parties of the Memorandum of Agreement**

This Memorandum of Understanding is entered into by and between Cleveland State Community College (CLSCC) and Cleveland-Bradley Chamber of Commerce (CBCC).

**II. Purpose**

The purpose of this MOU is to establish an agreement among the above-mentioned parties concerning their respective roles and responsibilities for implementation of a 2021 Governor's Investment in Vocational Education (GIVE) 2.0 Grant Competition from the Tennessee Higher Education Commission. This agreement is to establish and coordinate joint processes and procedures for the provision of a new Chemical Engineering Technology A.A.S program of study to benefit both high school and community college students. The collaboration will also expand specialized career and technical education (CTE) training and dual enrollment opportunities for students.

**III. Duration of the Agreement**

The agreement will take effect on August 30, 2021 and be valid for three (3) years unless terminated by one of the parties.

**IV. Vision and Overview**

CLSCC and CBCC desire to enter into a cooperative partnership in order to facilitate the coordination, integration, accessibility, and effectiveness of a new Chemical Engineering Technology program for high school and community college students. The new Chemical Engineering Technology program will create a new work-based learning pathway for students while developing and producing a skilled workforce capable of meeting the demands of the local industry through high school training, post-secondary/college bearing courses, industry credentialing, and workforce development skills.

**V. Duties of Parties**

In this section, the responsibilities and agreements of each party are described separately.

For the lead partner, CLSCC, the following may apply:

- Providing instructors
- Assistance with curriculum development
- Purchasing of equipment
- Advice on lab procedures
- Offering externships for community college faculty and high school teachers
- Providing mentors
- Providing internships through the Advanced Technologies Institute (ATI) program
- Development of STEM bus modules
- Development of Project-Based Learning (PBL) projects
- Providing guest speakers
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Conducting senior interviews for graduating high school students

For the applicant partner, CBCC, the following may apply:

- Assistance with curriculum development
- Provide input on equipment
- Assist in finding externships for community college faculty and high school teachers
- Providing mentors
- Assist with finding internships through the ATI program
- Assist in the development of Project-Based Learning (PBL) projects
- Providing guest speakers
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Conducting senior interviews for graduating high school students

## **VI. Decision Making Processes**

The Advisory Council consists of representatives from Cleveland State Community College, Bradley County School District, Polk County School District, Meigs County School District, Cleveland-Bradley Chamber of Commerce, Southeast Tennessee Development District, Cleveland Associated Industries, Olin Corporation, Wacker Chemie AG, McKee Foods, Mars, Sigura, and Cormetech as well the Program Coordinator. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Council will meet at least four (4) times per year or as needed, when necessary. The Program Coordinator will oversee and make all day-to-day decisions, when appropriate for the operations of the program.

The Program Coordinator will bring issues to the Advisory Council. The Council will be responsible for clarifying policies and program goals with the direct service team. Collaborators will have program and technical oversight of staff in their agencies.

**VII. Funding**

Funding for the project will be provided through the Tennessee Commission on Higher Education in accordance with any approved grant award and required federal and state applicable policies and procedures.

**VIII. Procedures for Modification and Termination**

The MOU may be modified, revised, extended, or renewed by mutual written consent of all parties, by the issuance of a written amendment signed and dated by all parties.

Either party may withdraw from this MOU provided written notification of the withdrawal is given to the other party at least one (1) month prior to the withdrawal date.

**IX. Severance Clause**

If any part of this agreement becomes unenforceable or illegal, then the agreement will continue in force, but the offending provision(s) shall be severed from the agreement and will have no effect on the remaining services agreed to and associated performance.

This MOU is a zero-dollar exchange agreement. If there is an anticipated monetary exchange of goods and services outside of this MOU, local, state, and federal procurement policies and procedures must be followed.

**X. Signatures**

All partners in this agreement sign to confirm their acceptance of its terms by their signature.



---

Mike Griffin  
President and CEO  
Cleveland-Bradley Chamber of  
Commerce



---

Dr. William Seymour  
President  
Cleveland State Community College

# **Memorandum of Understanding (MOU)**

**Between**

**Cleveland State Community College**

**and**

**Southeast Tennessee Development District**

## **I. Parties of the Memorandum of Agreement**

This Memorandum of Understanding is entered into by and between Cleveland State Community College (CLSCC) and Southeast Tennessee Development District (SETD).

## **II. Purpose**

The purpose of this MOU is to establish an agreement among the above-mentioned parties concerning their respective roles and responsibilities for implementation of a 2021 Governor's Investment in Vocational Education (GIVE) 2.0 Grant Competition from the Tennessee Higher Education Commission. This agreement is to establish and coordinate joint processes and procedures for the provision of a new Chemical Engineering Technology A.A.S program of study to benefit both high school and community college students. The collaboration will also expand specialized career and technical education (CTE) training and dual enrollment opportunities for students.

## **III. Duration of the Agreement**

The agreement will take effect on August 30, 2021 and be valid for three (3) years unless terminated by one of the parties.

## **IV. Vision and Overview**

CLSCC and SETD desire to enter into a cooperative partnership in order to facilitate the coordination, integration, accessibility, and effectiveness of a new Chemical Engineering Technology program for high school and community college students. The new Chemical Engineering Technology program will create a new work-based learning pathway for students while developing and producing a skilled workforce capable of meeting the demands of the local industry through high school training, post-secondary/college bearing courses, industry credentialing, and workforce development skills.

## **V. Duties of Parties**

In this section, the responsibilities and agreements of each party are described separately.

For the lead partner, CLSCC, the following may apply:

- Providing an instructor
- Assistance with curriculum development
- Purchasing of equipment
- Advice on lab procedures
- Offering externships for community college faculty and high school teachers
- Providing mentors
- Providing internships through the Advanced Technologies Institute (ATI) program
- Development of STEM bus modules
- Development of Project-Based Learning (PBL) projects
- Providing guest speakers
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Conducting senior interviews for graduating high school students

For the applicant partner, SETD, the following may apply:

- Assistance with curriculum development
- Assist with matching mentors with high school students
- Collaboration on the development of Project-Based Learning (PBL) projects
- Providing wraparound services to students who qualify
- Provide Career Preparation Training
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings

## **VI. Decision Making Processes**

The Advisory Council consists of representatives from Cleveland State Community College, Bradley County School District, Polk County School District, Meigs County School District, Cleveland-Bradley Chamber of Commerce, Southeast Tennessee Development District, Cleveland Associated Industries, Olin Corporation, Wacker Chemie AG, McKee Foods, Mars, Sigura, and Cormetech as well the Program Coordinator. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Council will meet at least four (4) times per year or as needed, when necessary. The Program Coordinator will oversee and make all day-to-day decisions, when appropriate for the operations of the program.

The Program Coordinator will bring issues to the Advisory Council. The Council will be responsible for clarifying policies and program goals with the direct service team. Collaborators will have program and technical oversight of staff in their agencies.

**VII. Funding**

Funding for the project will be provided through the Tennessee Commission on Higher Education in accordance with any approved grant award and required federal and state applicable policies and procedures.

**VIII. Procedures for Modification and Termination**

The MOU may be modified, revised, extended, or renewed by mutual written consent of all parties, by the issuance of a written amendment signed and dated by all parties.

Either party may withdraw from this MOU provided written notification of the withdrawal is given to the other party at least one (1) month prior to the withdrawal date.

**IX. Severance Clause**

If any part of this agreement becomes unenforceable or illegal, then the agreement will continue in force, but the offending provision(s) shall be severed from the agreement and will have no effect on the remaining services agreed to and associated performance.

This MOU is a zero-dollar exchange agreement. If there is an anticipated monetary exchange of goods and services outside of this MOU, local, state, and federal procurement policies and procedures must be followed.

**X. Signatures**

All partners in this agreement sign to confirm their acceptance of its terms by their signature.



Beth Jones  
Executive Director  
Southeast Tennessee Development  
District



Dr. William Seymour  
President  
Cleveland State Community College



Michele Holt  
Director of Workforce Development  
Southeast Tennessee Local Workforce  
Development Board



# **Memorandum of Understanding (MOU)**

**Between**

**Cleveland State Community College**

**and**

**Cleveland Associated Industries**

## **I. Parties of the Memorandum of Agreement**

This Memorandum of Understanding is entered into by and between Cleveland State Community College (CLSCC) and Cleveland Associated Industries (CAI).

## **II. Purpose**

The purpose of this MOU is to establish an agreement among the above-mentioned parties concerning their respective roles and responsibilities for implementation of a 2021 Governor's Investment in Vocational Education (GIVE) 2.0 Grant Competition from the Tennessee Higher Education Commission. This agreement is to establish and coordinate joint processes and procedures for the provision of a new Chemical Engineering Technology program of study to benefit both high school and community college students. The collaboration will also expand specialized career and technical education (CTE) training and dual enrollment opportunities for students.

## **III. Duration of the Agreement**

The agreement will take effect on August 30, 2021, and be valid for three (3) years unless terminated by one of the parties.

## **IV. Vision and Overview**

CLSCC and CAI desire to enter into a cooperative partnership in order to facilitate the coordination, integration, accessibility, and effectiveness of a new Chemical Engineering Technology program for high school and community college students. The new Chemical Engineering Technology program will create a new work-based learning pathway for students while developing and producing a skilled workforce capable of meeting the demands of the local industry through high school training, post-secondary/college bearing courses, industry credentialing, and workforce development skills.

## **V. Duties of Parties**

In this section, the responsibilities and agreements of each party are described separately.

For the lead partner, CLSCC, the following may apply:

- Assistance with curriculum development

- Purchasing of equipment
- Advice on lab procedures
- Offering externships for community college faculty and high school teachers
- Providing mentors
- Providing internships through the Advanced Technologies Institute program
- Development of STEM bus modules
- Development of Project-Based Learning (PBL) projects
- Providing guest speakers
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Conducting senior interviews for graduating high school students

For the applicant partner, CAI, the following may apply:

- Assistance with curriculum development
- Assistance with purchasing equipment
- Assist with matching mentors with high school students
- Collaboration on the development of Project-Based Learning (PBL) project
- Sponsor Manufacturing Day
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings

## **VI. Decision Making Processes**

The Advisory Council consists of representatives from Cleveland State Community College, Bradley County School District, Polk County School District, Meigs County School District, Cleveland-Bradley Chamber of Commerce, Southeast Tennessee Development District, Cleveland Associated Industries, Olin Corporation, Wacker Chemie AG, McKee Foods, Mars, Sigura, and Cormetech as well the Program Coordinator. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Council will meet at least four (4) times per year or as needed, when necessary. The Program Coordinator will oversee and make all day-to-day decisions, when appropriate for the operations of the program.

The Program Coordinator will bring issues to the Advisory Council. The Council will be responsible for clarifying policies and program goals with the direct service team. Collaborators will have program and technical oversight of staff in their agencies.

## **VII. Funding**

Funding for the project will be provided through the Tennessee Commission on Higher Education in accordance with any approved grant award and required federal and state applicable policies and procedures.

**VIII. Procedures for Modification and Termination**

The MOU may be modified, revised, extended, or renewed by mutual written consent of all parties, by the issuance of a written amendment signed and dated by all parties.

Either party may withdraw from this MOU provided written notification of the withdrawal is given to the other party at least one (1) month prior to the withdrawal date.

**IX. Severance Clause**

If any part of this agreement becomes unenforceable or illegal, then the agreement will continue in force, but the offending provision(s) shall be severed from the agreement and will have no effect on the remaining services agreed to and associated performance.

This MOU is a zero-dollar exchange agreement. If there is an anticipated monetary exchange of goods and services outside of this MOU, local, state, and federal procurement policies and procedures must be followed.

**X. Signatures**

All partners in this agreement sign to confirm their acceptance of its terms by their signature.



Lisa Fain  
Executive Director  
Cleveland Associated Industries



Dr. William Seymour  
President  
Cleveland State Community College

# Appendix E: MOUs and Letters of Support from Industry Partners

## **Memorandum of Understanding (MOU)**

**Between**

**Cleveland State Community College**

**and**

**McKee Foods Corporation**

### **I. Parties of the Memorandum of Agreement**

This Memorandum of Understanding is entered into by and between Cleveland State Community College (CSCC) and McKee Foods Corporation (McKee Foods). Participation in any of the following activities is subject to the business needs and priorities of McKee Foods Corporation. Participation is solely at the discretion and approval of management at McKee Foods Corporation.

### **II. Purpose**

The purpose of this MOU is to establish an agreement among the above-mentioned parties concerning their respective roles and responsibilities for implementation of a 2021 Governor's Investment in Vocational Education (GIVE) 2.0 Grant Competition from the Tennessee Higher Education Commission. This agreement is to establish and coordinate joint processes and procedures for the provision of a new Chemical Engineering Technology program of study to benefit both high school and community college students. The collaboration will also expand specialized career and technical education (CTE) training and dual enrollment opportunities for students.

### **III. Duration of the Agreement**

The agreement will take effect on August 30, 2021 and be valid for three (3) years unless terminated by one of the parties.

### **IV. Vision and Overview**

CSCC and McKee Foods desire to enter into a cooperative partnership in order to facilitate the coordination, integration, accessibility, and effectiveness of a new Chemical Engineering Technology program for high school and community college students. The new Chemical Engineering Technology program will create a new work-based learning pathway for students while developing and producing a skilled workforce capable of meeting the demands of the local industry through high school training, post-secondary/college bearing courses, industry credentialing, and workforce development skills.

## **V. Duties of Parties**

In this section, the responsibilities and agreements of each party are described separately.

For the lead partner, CSCC, the following may apply:

- Assistance with curriculum development
- Purchasing of equipment
- Advice on lab procedures
- Offering externships for community college faculty and high school teachers
- Providing mentors
- Providing internships through the Advanced Technologies Institute (ATI) program
- Development of STEM bus modules
- Development of Project-Based Learning (PBL) projects
- Providing guest speakers
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Conducting senior interviews for graduating high school students

For the applicant partner, McKee Foods, the following may apply:

- Assistance with curriculum development
- Assistance with the purchasing of equipment
- Advice on lab and safety procedures
- Collaborate on the development of Project-Based Learning (PBL) projects
- Providing guest speakers
- Participating in career fairs
- Serving on the Advisory Council and attending meetings

## **VI. Decision Making Processes**

The Advisory Council consists of representatives from Cleveland State Community College, Bradley County School District, Polk County School District, Meigs County School District, Cleveland-Bradley Chamber of Commerce, Southeast Tennessee Development District, Cleveland Associated Industries, Olin Corporation, Wacker Chemie AG, McKee Foods, Mars, Sigura, and Cormetech as well the Program Coordinator. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Council will meet at least four (4) times per year or as needed, when necessary. The Program Coordinator will oversee and make all day-to-day decisions, when appropriate for the operations of the program.

The Program Coordinator will bring issues to the Advisory Council. The Council will be responsible for clarifying policies and program goals with the direct service team. Collaborators will have program and technical oversight of staff in their agencies.

**VII. Funding**

Funding for the project will be provided through the Tennessee Commission on Higher Education in accordance with any approved grant award and required federal and state applicable policies and procedures.

**VIII. Procedures for Modification and Termination**

The MOU may be modified, revised, extended, or renewed by mutual written consent of all parties, by the issuance of a written amendment signed and dated by all parties.

Either party may withdraw from this MOU provided written notification of the withdrawal is given to the other party at least one (1) month prior to the withdrawal date.

**IX. Severance Clause**

If any part of this agreement becomes unenforceable or illegal, then the agreement will continue in force, but the offending provision(s) shall be severed from the agreement and will have no effect on the remaining services agreed to and associated performance.

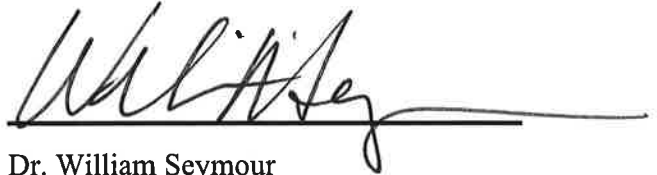
This MOU is a zero-dollar exchange agreement. If there is an anticipated monetary exchange of goods and services outside of this MOU, local, state, and federal procurement policies and procedures must be followed.

**X. Signatures**

All partners in this agreement sign to confirm their acceptance of its terms by their signature.

Connie Vaughan

Connie Vaughan  
McKee Foods Corporation

A handwritten signature in dark ink, appearing to read "William Seymour", is written over a horizontal line.

Dr. William Seymour  
President  
Cleveland State Community College



Stuart, Erika <estuart01@clevelandstatecc.edu>

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## Fwd: MOU for PIE Center

2 messages

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**Arlette Robinson** <arobinson@bradleyschools.org> Thu, Sep 16, 2021 at 6:11 AM  
To: "Stuart, Erika" <estuart01@clevelandstatecc.edu>  
Cc: Brittany Cannon <bcannon@bradleyschools.org>, "Wyrick, Karen" <kwyrick@clevelandstatecc.edu>

Please find attached McKee's MOU. I wonder if since the signature is just an electronic font, we might want to attach a copy of the email at the end of the MOU to explain the signature.

 See ~~message~~  
message

The same with Olin???



Arlette Robinson  
Bradley County Schools  
CTE Director  
800 South Lee Highway  
Cleveland, TN 37311  
Work (423) 479-0458 Cell (423) 284-6525

----- Forwarded message -----

From: **Connie Vaughan** <Connie.Vaughan@mckee.com>  
Date: Wed, Sep 15, 2021 at 10:38 PM



Subject: MOU for PIE Center

To: Arlette Robinson <arobinson@bradleyschools.org>

Arlette – I apologize for the delay. Please see revised. We are happy to participate. I am working from home without a scanner. I hope the signature works ok for your purposes.

Connie Vaughan

Government Relations

McKee Foods Corp.

Connie.Vaughan@mckee.com



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24K

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**Stuart, Erika** <estuart01@clevelandstatecc.edu> Thu, Sep 16, 2021 at 7:19 AM  
To: Arlette Robinson <arobinson@bradleyschools.org>

Received, thank you!

[Quoted text hidden]

--

**Erika Stuart**

Grants Director

Cleveland State Community College and Foundation

3535 Adkisson Drive Cleveland, TN 37312

(423) 614-8738

**Cleveland State**  
COMMUNITY COLLEGE

# **Memorandum of Understanding (MOU)**

**Between**

**Cleveland State Community College**

**and**

**Olin Corporation**

## **I. Parties of the Memorandum of Agreement**

This Memorandum of Understanding is entered into by and between Cleveland State Community College (CLSCC) and Olin Corporation (Olin).

## **II. Purpose**

The purpose of this MOU is to establish an agreement among the above-mentioned parties concerning their respective roles and responsibilities for implementation of a 2021 Governor's Investment in Vocational Education (GIVE) 2.0 Grant Competition from the Tennessee Higher Education Commission. This agreement is to establish and coordinate joint processes and procedures for the provision of a new Chemical Engineering Technology A.A.S program of study to benefit both high school and community college students. The collaboration will also expand specialized career and technical education (CTE) training and dual enrollment opportunities for students.

## **III. Duration of the Agreement**

The agreement will take effect on August 30, 2021 and be valid for three (3) years unless terminated by one of the parties.

## **IV. Vision and Overview**

CLSCC and Olin desire to enter into a cooperative partnership in order to facilitate the coordination, integration, accessibility, and effectiveness of a new Chemical Engineering Technology program for high school and community college students. The new Chemical Engineering Technology program will create a new work-based learning pathway for students while developing and producing a skilled workforce capable of meeting the demands of the local industry through high school training, post-secondary/college bearing courses, industry credentialing, and workforce development skills.

## **V. Duties of Parties**

In this section, the responsibilities and agreements of each party are described separately.

For the lead partner, CLSCC, the following may apply:

- Providing an instructor
- Assistance with curriculum development
- Purchasing of equipment
- Advice on lab procedures
- Offering externships for community college faculty and high school teachers
- Providing mentors
- Providing internships through the Advanced Technologies Institute (ATI) program
- Development of STEM bus modules
- Development of Project-Based Learning (PBL) projects
- Providing guest speakers
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Conducting senior interviews for graduating high school students

For the applicant partner, Olin, the following may, subject to Olin's prior approval in Olin's sole discretion, apply:

- Assistance with curriculum development
- Advice on lab and safety procedures
- Offering externships for community college faculty and high school teachers
- Providing mentors
- Assist with the development of STEM bus modules
- Collaborate on the development of Project-Based Learning (PBL) projects
- Providing guest speakers
- Providing job shadowing opportunities
- Participating in Manufacturing Week through Cleveland Associated Industries
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Conducting senior interviews for graduating high school students

#### **VI. Decision Making Processes**

The Advisory Council consists of representatives from Cleveland State Community College, Bradley County School District, Polk County School District, Meigs County School District, Cleveland-Bradley Chamber of Commerce, Southeast Tennessee Development District, Cleveland Associated Industries, Olin Corporation, Wacker Chemie AG, McKee Foods, Mars, Sigura, and Cormetech as well the Program Coordinator. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Council will meet at least four (4) times per year or as

needed, when necessary. The Program Coordinator will oversee and make all day-to-day decisions, when appropriate for the operations of the program.

The Program Coordinator will bring issues to the Advisory Council. The Council will be responsible for clarifying policies and program goals with the direct service team. Collaborators will have program and technical oversight of staff in their agencies.

**VII. Funding**

Funding for the project will be provided through the Tennessee Commission on Higher Education in accordance with any approved grant award and required federal and state applicable policies and procedures.

**VIII. Procedures for Modification and Termination**

The MOU may be modified, revised, extended, or renewed by mutual written consent of all parties, by the issuance of a written amendment signed and dated by all parties.

Either party may withdraw from this MOU provided written notification of the withdrawal is given to the other party at least one (1) month prior to the withdrawal date.

**IX. Severance Clause**

If any part of this agreement becomes unenforceable or illegal, then the agreement will continue in force, but the offending provision(s) shall be severed from the agreement and will have no effect on the remaining services agreed to and associated performance.

This MOU is a zero-dollar exchange agreement. If there is an anticipated monetary exchange of goods and services outside of this MOU, local, state, and federal procurement policies and procedures must be followed.

**X. Signatures**

All partners in this agreement sign to confirm their acceptance of its terms by their signature.

Karin Cook

Karin Cook  
Plant Manager  
Olin Corporation

A handwritten signature in dark ink, appearing to read "William Seymour", written over a horizontal line.

Dr. William Seymour  
President  
Cleveland State Community College



Stuart, Erika <estuart01@clevelandstatecc.edu>

---

## Fwd: Olin MOU for GIVE 2.0 Grant

1 message

---

**Arlette Robinson** <arobinson@bradleyschools.org> Wed, Sep 15, 2021 at 2:53 PM  
To: "Stuart, Erika" <estuart01@clevelandstatecc.edu>, "Wyrick, Karen"  
<kwyrick@clevelandstatecc.edu>

Olin

----- Forwarded message -----

From: **Cook, Karin S CHAS** <KSCook@olin.com>  
Date: Wed, Sep 15, 2021, 2:37 PM  
Subject: RE: Olin MOU for GIVE 2.0 Grant  
To: Arlette Robinson <arobinson@bradleyschools.org>

---

**From:** Arlette Robinson <arobinson@bradleyschools.org>  
**Sent:** Wednesday, September 15, 2021 12:38 PM  
**To:** Cook, Karin S CHAS <KSCook@olin.com>  
**Subject:** Re: Olin MOU for GIVE 2.0 Grant

<< THIS EMAIL ORIGINATED FROM OUTSIDE OF OLIN >>

Attached is the document. I can not save the document with no "Mark Ups". To print the document, go into Word, click review, and then click accept all of the changes. Then it should be ready to print and sign.

Please let me know if it does not work.

Thank you! I like the sentence that was added by legal at the first. This covers everyone to ensure communication is strong.



Arlette Robinson

Bradley County Schools

CTE Director

800 South Lee Highway

Cleveland, TN 37311

Work (423) 479-0458 Cell (423) 284-6525

On Wed, Sep 15, 2021 at 11:59 AM Cook, Karin S CHAS <KSCook@olin.com> wrote:

Hi Arlette

# **Memorandum of Understanding (MOU)**

**Between**

**Cleveland State Community College**

**and**

**WACKER-Charleston**

## **I. Parties of the Memorandum of Agreement**

This Memorandum of Understanding is entered into by and between Cleveland State Community College (CLSCC) and WACKER-Charleston.

## **II. Purpose**

The purpose of this MOU is to establish an agreement among the above-mentioned parties concerning their respective roles and responsibilities for implementation of a 2021 Governor's Investment in Vocational Education (GIVE) 2.0 Grant Competition from the Tennessee Higher Education Commission. This agreement is to establish and coordinate joint processes and procedures for the provision of a new Chemical Engineering Technology A.A.S. program of study to benefit both high school and community college students. The collaboration will also expand specialized career and technical education (CTE) training and dual enrollment opportunities for students.

## **III. Duration of the Agreement**

The agreement will take effect on August 30, 2021 and be valid for three (3) years unless terminated by one of the parties.

## **IV. Vision and Overview**

CLSCC and Wacker desire to enter into a cooperative partnership in order to facilitate the coordination, integration, accessibility, and effectiveness of a new Chemical Engineering Technology program for high school and community college students. The new Chemical Engineering Technology program will create a new work-based learning pathway for students while developing and producing a skilled workforce capable of meeting the demands of the local industry through high school training, post-secondary/college bearing courses, industry credentialing, and workforce development skills.

## **V. Duties of Parties**

In this section, the responsibilities and agreements of each party are described separately.

For the lead partner, CLSCC, the following may apply:

- Providing an instructor

- Assistance with curriculum development
- Purchasing of equipment
- Advice on lab procedures
- Offering externships for community college faculty and high school teachers
- Providing mentors
- Providing internships through the Advanced Technologies Institute (ATI) program
- Development of STEM bus modules
- Development of Project-Based Learning (PBL) projects
- Providing guest speakers
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Conducting senior interviews for graduating high school students

For the applicant partner, Wacker, the following may apply:

- Assistance with curriculum development
- Assistance with the purchasing of equipment
- Advice on lab and safety procedures
- Offering externships for community college faculty and high school teachers
- Providing mentors
- Providing internships through the ATI program
- Assist with the development of STEM bus modules
- Collaborate on the development of Project-Based Learning (PBL) projects
- Providing guest speakers
- Providing job shadowing opportunities
- Participating in Manufacturing Week through Cleveland Associated Industries
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Conducting senior interviews for graduating high school students

#### **VI. Decision Making Processes**

The Advisory Council consists of representatives from Cleveland State Community College, Bradley County School District, Polk County School District, Meigs County School District, Cleveland-Bradley Chamber of Commerce, Southeast Tennessee Development District, Cleveland Associated Industries, Olin Corporation, WACKER-Charleston, McKee Foods, Mars, Sigura, and Cormetech as well the Program Coordinator. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Council will meet at least four (4) times per year or as



needed, when necessary. The Program Coordinator will oversee and make all day-to-day decisions, when appropriate for the operations of the program.

The Program Coordinator will bring issues to the Advisory Council. The Council will be responsible for clarifying policies and program goals with the direct service team. Collaborators will have program and technical oversight of staff in their agencies.

**VII. Funding**

Funding for the project will be provided through the Tennessee Commission on Higher Education in accordance with any approved grant award and required federal and state applicable policies and procedures.

**VIII. Procedures for Modification and Termination**

The MOU may be modified, revised, extended, or renewed by mutual written consent of all parties, by the issuance of a written amendment signed and dated by all parties.

Either party may withdraw from this MOU provided written notification of the withdrawal is given to the other party at least one (1) month prior to the withdrawal date.

**IX. Severance Clause**

If any part of this agreement becomes unenforceable or illegal, then the agreement will continue in force, but the offending provision(s) shall be severed from the agreement and will have no effect on the remaining services agreed to and associated performance.

This MOU is a zero-dollar exchange agreement. If there is an anticipated monetary exchange of goods and services outside of this MOU, local, state, and federal procurement policies and procedures must be followed.

**X. Signatures**

All partners in this agreement sign to confirm their acceptance of its terms by their signature.



(Ken Collins)  
Sr. Director, Site Leader  
WACKER-Charleston



Dr. William Seymour  
President  
Cleveland State Community College

September 14, 2021



Dr. William Seymour, President  
Cleveland State Community College  
3535 Adkisson Drive, NW  
Cleveland, TN 37312

Dear Dr. Seymour,

As one of the world's leading water treatment providers, Sigura sees each day as a new opportunity to make a positive impact on a global scale. For more than 30 years, we've provided our customers with complete and innovative solutions, including a wide range of biocides and proprietary engineered equipment that meet specific needs. Our efforts span a range of Industrial, Commercial, and Municipal Water applications.

Sigura continues to be committed to the development of students, as they are the future of our business. As such, we are pleased to support Cleveland State Community College's GIVE 2.0 application to create a new Chemical Engineering Technology program of study to benefit both high school and community college students. Sigura commits to continuing to provide students with work-based learning opportunities and teachers with externship experiences. We also commit to serving on the Advisory Council, providing technical assistance with curriculum integration, and providing classroom mentors annually.

We appreciate the community college's efforts to partner with area businesses to address the future workforce needs and bridge the gap between education and business and industry practical applications. We are excited to share our expertise with your faculty and the teachers of the district partnerships and provide students with hands-on learning experiences.

Sincerely,

Cindy Storelli  
Sr. Director, Global Supply Chain



Jeff Walker  
Director, Cleveland Operations

Cormetech, Inc.  
Environmental Technologies  
3300 Old Tasso Road  
Cleveland, Tennessee 37312  
Office: 423.473.6900  
Fax: 423.473.6901

September 13, 2021

Dr. William Seymour, President  
Cleveland State Community College  
3535 Adkisson Drive, NW  
Cleveland, TN 37312

Dear Dr. Seymour,

Cormetech, Inc. is a world leader in manufacturing of high-quality environmental catalysts, providing SCR catalyst regeneration and engineering services for the power, marine, industrial-process, refinery, and petrochemical markets. Our company has leveraged more than 30 years of field experience and ceramic extrusion technology to create innovative catalyst products and services that meet our customers' needs.

Cormetech is excited to support Cleveland State Community College's GIVE 2.0 application to create a new Chemical Engineering Technology program of study to benefit both high school and community college students. We commit to providing students with work-based learning opportunities, teachers with externship experiences, serving on the Advisory Council, providing technical assistance with curriculum integration, and providing classroom mentors annually.

We at Cormetech thank you for the opportunity to work together to provide real-world training opportunities for our future workforce and educators.

Sincerely,

A handwritten signature in black ink, appearing to read "JAW", with a long horizontal stroke extending to the right.

Jeff Walker  
Cormetech, Inc.  
Director, Cleveland Operations

# Appendix F: MOUs and Letters of Support from LEAs

450 EMCS Building, Dept 2452  
615 McCallie Avenue  
Chattanooga, TN 37403  
Phone: (423) 425-2256  
Fax: (423) 425-5311  
[www.utc.edu/engr](http://www.utc.edu/engr)

September 14, 2021

To: Governor's Investment in Technical Education (GIVE 2.0) Committee,

This letter is to inform you that The College of Engineering and Computer Science at The University of Tennessee at Chattanooga is in support of the GIVE 2.0 grant application being submitted by Cleveland State Community College (CLSCC).

As a post-secondary university, UTC supports the creation of a new Chemical Engineering Technology program of study to benefit high school, community college, and university students. If awarded this grant, UTC will be happy to work with CLSCC to develop a BAS or other programming for Chemical Engineering Technology students.

This program supports our goals and objectives to empower students, and we are proud to support this endeavor.

Sincerely,

**Daniel  
Pack**

Digitally signed by  
Daniel Pack  
Date: 2021.09.15  
15:31:15 -04'00'

Daniel Pack  
Dean  
College of Engineering and Computer Science  
University of Tennessee Chattanooga

# **Memorandum of Understanding (MOU)**

**Between**

**Cleveland State Community College**

**and**

**Bradley County School District**

## **I. Parties of the Memorandum of Agreement**

This Memorandum of Understanding is entered into by and between Cleveland State Community College (CLSCC) and Bradley County School District (BCS).

## **II. Purpose**

The purpose of this MOU is to establish an agreement among the above-mentioned parties concerning their respective roles and responsibilities for implementation of a 2021 Governor's Investment in Vocational Education (GIVE) 2.0 Grant Competition from the Tennessee Higher Education Commission. This agreement is to establish and coordinate joint processes and procedures for the provision of a new Chemical Engineering Technology A.A.S. program of study to benefit both high school and community college students. The collaboration will also expand specialized career and technical education (CTE) training and dual enrollment opportunities for students.

## **III. Duration of the Agreement**

The agreement will take effect on August 30, 2021 and be valid for three (3) years unless terminated by one of the parties.

## **IV. Vision and Overview**

CLSCC and BCS desire to enter into a cooperative partnership in order to facilitate the coordination, integration, accessibility, and effectiveness of a new Chemical Engineering Technology program for high school and community college students. The new Chemical Engineering Technology program will create a new work-based learning pathway for students while developing and producing a skilled workforce capable of meeting the demands of the local industry through high school training, post-secondary/college bearing courses, industry credentialing, and workforce development skills.

## **V. Duties of Parties**

In this section, the responsibilities and agreements of each party are described separately.

For the lead partner, CLSCC, the following may apply:

- Providing an Instructor

- Assistance with curriculum development
- Purchasing of equipment
- Advice on lab procedures
- Offering externships for community college faculty and high school teachers
- Providing mentors
- Providing internships through the Advanced Technologies Institute program
- Development of STEM bus modules
- Development of Project-Based Learning (PBL) projects
- Providing guest speakers
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Conducting senior interviews for graduating high school students

For the applicant partner, BCS, the following may apply:

- Providing a Co-Director for the GIVE 2.0 Grant
- Assistance with curriculum development
- Purchasing of equipment
- Implementation of proper lab procedures in accordance with safety recommendations
- Recruiting high school teachers to participate in annual externships
- Matching mentors with high school students
- Advertising internships through the ATI program
- Providing students access to the STEM bus
- Development of Project-Based Learning (PBL) projects
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Hosting senior interviews for graduating high school students

#### **VI. Decision Making Processes**

The Advisory Council consists of representatives from Cleveland State Community College, Bradley County School District, Polk County School District, Meigs County School District, Cleveland-Bradley Chamber of Commerce, Southeast Tennessee Development District, Cleveland Associated Industries, Olin Corporation, Wacker Chemie AG, McKee Foods, Mars, Sigura, and Cormetech as well the Program Coordinator. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Council will meet at least four (4) times per year or as needed, when necessary. The Program Coordinator will oversee and make all day-to-day decisions, when appropriate for the operations of the program.

The Program Coordinator will bring issues to the Advisory Council. The Council will be responsible for clarifying policies and program goals with the direct service team. Collaborators will have program and technical oversight of staff in their agencies.

**VII. Funding**

Funding for the project will be provided through the Tennessee Commission on Higher Education in accordance with any approved grant award and required federal and state applicable policies and procedures.

**VIII. Procedures for Modification and Termination**

The MOU may be modified, revised, extended, or renewed by mutual written consent of all parties, by the issuance of a written amendment signed and dated by all parties.

Either party may withdraw from this MOU provided written notification of the withdrawal is given to the other party at least one (1) month prior to the withdrawal date.

**IX. Severance Clause**

If any part of this agreement becomes unenforceable or illegal, then the agreement will continue in force, but the offending provision(s) shall be severed from the agreement and will have no effect on the remaining services agreed to and associated performance.

This MOU is a zero-dollar exchange agreement. If there is an anticipated monetary exchange of goods and services outside of this MOU, local, state, and federal procurement policies and procedures must be followed.

**X. Signatures**

All partners in this agreement sign to confirm their acceptance of its terms by their signature.



Dr. Linda Cash  
Director of Schools  
Bradley County School District



Dr. William Seymour  
President  
Cleveland State Community College



# **Memorandum of Understanding (MOU)**

**Between**

**Cleveland State Community College**

**and**

**Polk County School District**

## **I. Parties of the Memorandum of Agreement**

This Memorandum of Understanding is entered into by and between Cleveland State Community College (CLSCC) and Polk County School District (PCSD).

## **II. Purpose**

The purpose of this MOU is to establish an agreement among the above-mentioned parties concerning their respective roles and responsibilities for implementation of a 2021 Governor's Investment in Vocational Education (GIVE) 2.0 Grant Competition from the Tennessee Higher Education Commission. This agreement is to establish and coordinate joint processes and procedures for the provision of a new Chemical Engineering Technology program of study to benefit both high school and community college students. The collaboration will also expand specialized career and technical education (CTE) training and dual enrollment opportunities for students.

## **III. Duration of the Agreement**

The agreement will take effect on August 30, 2021 and be valid for three (3) years unless terminated by one of the parties.

## **IV. Vision and Overview**

CLSCC and PCSD desire to enter into a cooperative partnership in order to facilitate the coordination, integration, accessibility, and effectiveness of a new Chemical Engineering Technology program for high school and community college students. The new Chemical Engineering Technology AAS program will create a new work-based learning pathway for students while developing and producing a skilled workforce capable of meeting the demands of the local industry through high school training, post-secondary/college bearing courses, industry credentialing, and workforce development skills.

## **V. Duties of Parties**

In this section, the responsibilities and agreements of each party are described separately.

For the lead partner, CLSCC, the following may apply:

- Assistance with curriculum development

- Purchasing of equipment
- Advice on lab procedures
- Offering externships for community college faculty and high school teachers
- Providing mentors
- Providing instructors
- Providing internships through the Advanced Technologies Institute program
- Development of STEM bus modules
- Development of Project-Based Learning (PBL) projects
- Providing guest speakers
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Conducting senior interviews for graduating high school students

For the applicant partner, PCSD, the following may apply:

- Assistance with curriculum development
- Implementation of proper lab procedures in accordance with safety recommendations
- Recruiting high school teachers to participate in annual externships
- Matching mentors with high school students
- Advertising internships through the ATI program
- Providing students access to the STEM bus
- Collaboration on the development of Project-Based Learning (PBL) project
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Hosting senior interviews for graduating high school students
- Assist in marketing and recruitment efforts to promote new program to students and parents.

## **VI. Decision Making Processes**

The Advisory Council consists of representatives from Cleveland State Community College, Bradley County School District, Polk County School District, Meigs County School District, Cleveland-Bradley Chamber of Commerce, Southeast Tennessee Development District, Cleveland Associated Industries, Olin Corporation, Wacker Chemie AG, McKee Foods, Mars, Sigura, and Cormetech as well the Program Coordinator. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Council will meet at least four (4) times per year or as needed, when necessary. The Program Coordinator will oversee and make all day-to-day decisions, when appropriate for the operations of the program.

The Program Coordinator will bring issues to the Advisory Council. The Council will be responsible for clarifying policies and program goals with the direct service team. Collaborators will have program and technical oversight of staff in their agencies.

**VII. Funding**

Funding for the project will be provided through the Tennessee Commission on Higher Education in accordance with any approved grant award and required federal and state applicable policies and procedures.

**VIII. Procedures for Modification and Termination**

The MOU may be modified, revised, extended, or renewed by mutual written consent of all parties, by the issuance of a written amendment signed and dated by all parties.

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This MOU is a zero-dollar exchange agreement. If there is an anticipated monetary exchange of goods and services outside of this MOU, local, state, and federal procurement policies and procedures must be followed.

**X. Signatures**

All partners in this agreement sign to confirm their acceptance of its terms by their signature.



Dr. James Jones  
Director of Schools  
Polk County School District



Dr. William Seymour  
President  
Cleveland State Community College

Approved for Ryan  
Goodman to sign  
for James Jones  
per phone conversation

## **Memorandum of Understanding (MOU)**

**Between**

**Cleveland State Community College**

**and**

**Meigs County School District**

### **I. Parties of the Memorandum of Agreement**

This Memorandum of Understanding is entered into by and between Cleveland State Community College (CLSCC) and Meigs County School District (MCSD).

### **II. Purpose**

The purpose of this MOU is to establish an agreement among the above-mentioned parties concerning their respective roles and responsibilities for implementation of a 2021 Governor's Investment in Vocational Education (GIVE) 2.0 Grant Competition from the Tennessee Higher Education Commission. This agreement is to establish and coordinate joint processes and procedures for the provision of a new Chemical Engineering Technology AAS program of study to benefit both high school and community college students. The collaboration will also expand specialized career and technical education (CTE) training and dual enrollment opportunities for students.

### **III. Duration of the Agreement**

The agreement will take effect on August 30, 2021 and be valid for three (3) years unless terminated by one of the parties.

### **IV. Vision and Overview**

CLSCC and MCSD desire to enter into a cooperative partnership in order to facilitate the coordination, integration, accessibility, and effectiveness of a new Chemical Engineering Technology program for high school and community college students. The new Chemical Engineering Technology program will create a new work-based learning pathway for students while developing and producing a skilled workforce capable of meeting the demands of the local industry through high school training, post-secondary/college bearing courses, industry credentialing, and workforce development skills.

### **V. Duties of Parties**

In this section, the responsibilities and agreements of each party are described separately.

For the lead partner, CLSCC, the following may apply:

- Assistance with curriculum development

- Purchasing of equipment
- Advice on lab procedures
- Offering externships for community college faculty and high school teachers
- Providing mentors
- Providing instructors
- Providing internships through the Advanced Technologies Institute program
- Development of STEM bus modules
- Development of Project-Based Learning (PBL) projects
- Providing guest speakers
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Conducting senior interviews for graduating high school students

For the applicant partner, MCSD, the following may apply:

- Assistance with curriculum development
- Implementation of proper lab procedures in accordance with safety recommendations
- Recruiting high school teachers to participate in annual externships
- Matching mentors with high school students
- Advertising internships through the ATI program
- Providing students access to the STEM bus
- Collaboration on the development of Project-Based Learning (PBL) project
- Supporting the Work-Based Learning (WBL) continuum
- Participating in career fairs
- Serving on the Advisory Council and attending meetings
- Hosting senior interviews for graduating high school students
- Assist in marketing and recruitment efforts to promote new program to students and parents.

#### **VI. Decision Making Processes**

The Advisory Council consists of representatives from Cleveland State Community College, Bradley County School District, Polk County School District, Meigs County School District, Cleveland-Bradley Chamber of Commerce, Southeast Tennessee Development District, Cleveland Associated Industries, Olin Corporation, Wacker Chemie AG, McKee Foods, Mars, Sigura, and Cormetech as well the Program Coordinator. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Council will meet at least four (4) times per year or as needed, when necessary. The Program Coordinator will oversee and make all day-to-day decisions, when appropriate for the operations of the program.

The Program Coordinator will bring issues to the Advisory Council. The Council will be responsible for clarifying policies and program goals with the direct service team. Collaborators will have program and technical oversight of staff in their agencies.

**VII. Funding**

Funding for the project will be provided through the Tennessee Commission on Higher Education in accordance with any approved grant award and required federal and state applicable policies and procedures.

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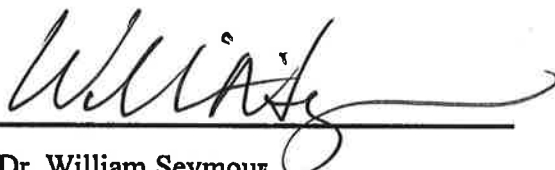
This MOU is a zero-dollar exchange agreement. If there is an anticipated monetary exchange of goods and services outside of this MOU, local, state, and federal procurement policies and procedures must be followed.

**X. Signatures**

All partners in this agreement sign to confirm their acceptance of its terms by their signature.



Clint Baker  
Director of Schools  
Meigs County School District



Dr. William Seymour  
President  
Cleveland State Community College

# Appendix G: Additional Program Details



### ***Role of Proposed Lab Supply Equipment***

The purchase of Lab Supplies (Equipment) are critical to implementation and training.

<b>Equipment Description (Lab Supplies)</b>	<b>Estimated Cost</b>
Laboratory Instructional Supplies, Signage, General Glassware Beakers (various sizes), Pipettes, Weights, Wash Bottles, Funnels	\$120,000.00
Goggles, Lab Coats	\$2,000.00
Analytical Balances (4)	\$16,000.00
pH Meters: pH station, handheld meters, spare probes, pH buffer kits,	\$5,690.00
Under Bench Ice Maker	\$3,900.00
Optical glass and plastic curvettes for UV Spectrometer	\$1,800.00
Manual and Self injecting syringes	\$999.00
<b>Total Cost of Equipment (Lab Supplies)</b>	<b>150,389.00</b>



# CLEVELAND STATE COMMUNITY COLLEGE

## CHEMICAL ENGINEERING TECHNOLOGY, AAS

The Chemical Engineering Technology, AAS is designed for those students interested in working as an operator/technician in a chemical manufacturing facility. Emphasis is placed on industrial safety and troubleshooting of typical chemical processes while incorporating real world case studies, teamwork, and effective communication skills. Other topics include blueprint interpretation, CAD design, electrical and mechanical fundamentals, and using computers to control processes and collect data. The program accomplishes these tasks by combining classroom study with practical hands-on-experience in the labs associated with the coursework.

This is a technical program designed to prepare students for employment. This program is not a transfer program, although many institutions accept all or part of the course work toward a bachelor's degree.

### --Proposed--

<b><u>FRESHMAN – FALL</u></b>	<b><u>CREDIT HOURS</u></b>
CHEM 1110 - General Chemistry I	4 (General Education)
CHET 1300 Process Equipment	3 (core)
GEN 1010 First Year Seminar	3 (Required by CSCC)
INFS 1010 Computer Applications	3 (approved)
MATH 1710 Precalculus Algebra	3 (General Education)

### **FRESHMAN - SPRING**

CHEM 1120 - General Chemistry II	4
CHET 1410 - Process Operations I	4 (core)
ENGL 1010 - English Composition I	3 (General Education)
CHET 1400 - Industrial Chemistry	4

### **SOPHOMORE - FALL**

CHET 2310 Process Operations II	3 (core)
CHET 2320 Process Control and Instrumentation II	3 (approved)
MECH 1340 Digital Fundamentals and PLCs	3
MATH 1530 Introductory Statistics	3 (approved)
Humanities/Fine Arts	3 (General Education)

### **SOPHOMORE – SPRING**

COMM 2025 Fundamentals of Communication	3 (General Education??approved)
CHET 1320 - Process Control Operations I	3 (core)
CHET 2340 Industrial Analysis	3 (approved)
CHET 2490 Internship	4 (approved)
Social/Behavior Science Elective	3 (General Education)

<b>TOTAL</b>	<b>62</b>
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## Ready Graduate Indicator Overview

### Overview

The *Ready Graduate* indicator is a new accountability metric in Tennessee's Every Student Succeeds Act (ESSA) plan and is aligned to the goals in the department's strategic plan, *Tennessee Succeeds*. The *Ready Graduate* indicator measures the percentage of students who earn a diploma from a Tennessee high school and meet success milestones that increase their probability of seamlessly enrolling in postsecondary education and securing high-quality employment.

### Implementation Timeline

The department's proposed implementation plan for the *Ready Graduate* indicator is outlined below. Note that the *Ready Graduate* indicator is based on lagged data, so the accountability indicator that is made public this fall (2018) is based on data from seniors who graduated in spring/summer 2017.

<b>Accountability Release Date</b>	<b>Graduation Cohort</b>	<b>Ready Graduate Indicator Implementation Snapshot</b>	<b>Specific Ready Graduate Indicator Requirements by Year</b>
Fall 2018	2016-17 Graduates	✓ ACT/SAT only	<ul style="list-style-type: none"> <li>• earn a composite score of 21 or higher on the ACT or a 1060 or higher on the SAT</li> </ul>
Fall 2019	2017-18 Graduates	<ul style="list-style-type: none"> <li>✓ ACT/SAT</li> <li>✓ 4 EPSOs</li> <li>✓ 2 EPSO + earn an industry certification</li> <li>✓ 2 EPSOs + earn an ASVAB AFQT score of military readiness</li> </ul>	<ul style="list-style-type: none"> <li>• earn a composite score of 21 or higher on the ACT or a 1060 or higher on the SAT; or</li> <li>• complete four early postsecondary opportunities (EPSOs); or</li> <li>• complete two EPSOs + earn an industry certification; or</li> <li>• complete two EPSOs + earn a score of 31* on the Armed Services Vocational Aptitude Battery (ASVAB) Armed Forces Qualifying Test (AFQT).</li> </ul>
Fall 2020	2018-19 Graduates	<ul style="list-style-type: none"> <li>✓ ACT/SAT</li> <li>✓ 4 EPSOs</li> <li>✓ 2 EPSO + earn an industry certification</li> <li>✓ 2 EPSOs + earn an ASVAB AFQT score of military readiness</li> <li>✓ 2 EPSOs + earn a WorkKeys NCRC level TBD</li> </ul>	<ul style="list-style-type: none"> <li>• earn a composite score of 21 or higher on the ACT or a 1060 or higher on the SAT; or</li> <li>• complete four early postsecondary opportunities (EPSOs); or</li> <li>• complete two EPSOs + earn an industry certification; or</li> <li>• complete two EPSOs + earn a score of 31* on the Armed Services Vocational Aptitude Battery (ASVAB) Armed Forces Qualifying Test (AFQT); or</li> <li>• complete two EPSOs + earn a WorkKeys National Career Readiness Certificate (level TBD)</li> </ul>

## Ready Graduate Indicator Overview

### Ready Graduate Indicator Evidence of Completion

The *Ready Graduate* indicator is meant to capture evidence of student performance beyond academic proficiency to represent a holistic, well-rounded education. The following table indicates what evidence will indicate a student has met each of the measures of readiness.

Early Postsecondary Opportunities	Evidence of Completion
<i>Advanced Placement (AP)</i>	<i>Complete course and attempt exam</i>
<i>Cambridge International Examinations (CIE)</i>	<i>Complete course and attempt exam</i>
<i>College Level Examination (CLEP)</i>	<i>Earn a passing score of 50 or higher on exam</i>
<i>Dual Enrollment</i>	<i>Complete course</i>
<i>Industry Certification (IC)</i> <i>Note: An IC could count for additional EPSO credit.</i> <i>Please refer to the <a href="#">ESSA Industry Certification Conversion Chart</a> for full details.</i>	<i>Earn passing score on exam and/or complete licensure requirements</i>
<i>International Baccalaureate (IB)</i>	<i>Complete course and attempt exam</i>
<i>Local Dual Credit</i>	<i>Complete course and attempt exam</i>
<i>Statewide Dual Credit</i>	<i>Complete course and attempt exam</i>
Other Indicators of Readiness	Evidence of Completion
<i>American College Testing (ACT)</i>	<i>Earn a composite score of 21 or higher</i>
<i>Armed Services Vocational Aptitude Battery (ASVAB)</i> <i>Armed Forces Qualifying Test (AFQT)</i>	<i>Earn a score of 31 or higher*</i>
<i>Scholastic Aptitude Test (SAT)</i>	<i>Earn a composite score of 1060 or higher</i>
<i>WorkKeys National Career Readiness Certificate (NCRC)</i>	<i>Earn an NCRC level TBD by earning aligned scores on the three WorkKeys exams: Applied Math, Graphic Literacy, and Workplace Documents</i>

\*Students must earn a minimum ASVAB AFQT score required to qualify for admission into at least one branch of the military as of June 1 following a student's graduation in order to demonstrate military readiness for the indicator. Future years' scores may change based on needs of the U.S. Department of Defense (DOD). Scores will be determined on June 1 annually for the following year's accountability.

The department is continuing to gather feedback on the implementation plan and plans to release final business rules in November 2018. For additional information, please email [TNED.Accountability@tn.gov](mailto:TNED.Accountability@tn.gov).

## **CLEVELAND STATE COMMUNITY COLLEGE FACULTY**

**TITLE:** Chemistry Instructor - General

**REPORTING SUPERVISOR:**

- Dean of the STEM
- Vice President for Academic Affairs
- President

**JOB OBJECTIVES:**

Instructors provide quality instruction for student learning and maintain a positive learning environment in the class. The major emphasis for instructors is on teaching and evaluating students in the course. Classes are taught in a variety of formats and at several different locations, as well as online. Instructors also communicate with students between classes and are responsible for several administrative duties such as reporting on academic activity and submitting final grades.

**ESSENTIAL JOB FUNCTIONS:**

- Fulfill all instructional requirements as mandated by Cleveland State Community College and the Tennessee Board of Regents.
- Utilize appropriate instructional materials and methods.
- Maintain currency in the instructional field and teaching methodology.
- Devote a minimum of 37.5 hours per week to the institution, maintain appropriate office hours, and secure approval for any commitments which might affect employment.
- Be accessible to students for advisement, academic help, and assistance depending on instructional format.
- As needed, teach during all operational hours of the college at any of the college's three locations as well as high schools as needed.
- Participate in institutional and academic unit meetings.
- Maintain and safeguard all necessary records and report grades periodically as prescribed by the Registrar.
- Comply with Cleveland State Community College and Tennessee Board of Regents Guidelines and Policies.
- Participate in periodic evaluations.
- Support and participate in the recruitment and retention efforts of the college.
- Perform other duties as assigned.



**JOB STANDARDS:**

- Hold a minimum of a Master's degree from an accredited institution in the teaching discipline or a Master's degree with a minimum of eighteen hours in the discipline (Chemistry or Chemical Engineering).
- Meet the standards presently required or those which may be required in the future by the Tennessee State Board of Regents and the Southern Association of Colleges and Schools Commission on Colleges.
- May be required to achieve additional skill, knowledge, or credentialing levels.

The educational requirements listed for this position are for the grade of instructor. However, the appointee may hold a higher rank provided he or she possesses the minimum education and experience now required or established in the future by the Tennessee State Board of Regents.

**CRITICAL SKILLS/EXPERTISE/EXPERIENCE:**

- Areas of teaching emphasis include one or more of the following disciplines: Chemistry, Chemical Engineering
- Possess adequate teaching skills and perform normal duties expected of a teacher at the college level.
- Experience with alternative delivery instruction modes recommended - hybrid, online, interactive, etc.
- Where applicable, maintain adequate stock levels of supplies for laboratory use.
- Oversee laboratory and classroom safety.
- Exhibit knowledge of the comprehensive community college concept.
- Exhibit knowledge of effective interpersonal skills.

**NON-ESSENTIAL FUNCTIONS:**

- Perform public service in the community as defined by the institution's role and mission.
- Promote and serve as advisor to campus clubs, student groups, or other related student activities.

**JOB LOCATION:**

Main Campus or assigned off-campus locations with a willingness and ability to travel to local high schools and industries as necessary.

**EQUIPMENT:**

- Exhibit competency pertaining to all equipment specifically related to the instructor's discipline.
- Exhibit knowledge of availability and operation of instructional media.
- Achieve computer-related skills required for job performance.

# Christy Derrick, MPH

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www.evaluationgroup.com 

Evaluator with 20+ years of experience dedicated to designing, conducting, and managing partner-focused, participatory evaluations in a wide variety of areas including education and human services.

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## Current Projects with TEG

- Magnet Schools Assistance Program
- GEAR UP Grant
- Teacher and School Leader Incentive Grant
- Education Innovation and Research Grant
- Innovative Approaches to Literacy Grant
- Georgia Innovation Fund
- School Violence Prevention Program

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## Education

### MPH / University of South Carolina

1999 - Health Care Administration

### BS / Appalachian State University

Organizational Psychology with a minor in Business

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## Experience

### Evaluator / The Evaluation Group [2008 - Present]

### Research Associate, Training Evaluator, Evaluation Coordinator / Center for Children and Family Studies at USC [2000-2008]

- Developed and implemented human service program evaluations.
- Co-principal investigator of the evaluation of Teen LEAD, a federally-funded project of the SC Department of Education. Served as Principal Investigator of the Stewards of Children project, an evaluation of online child sexual abuse prevention training.
- Led evaluation activities to evaluate in-house training programs delivered to South Carolina DSS.
- Activities included the creation of data collection instruments, the collection of data, data analysis, assisting with the development and evaluation of blended learning training.
- Managed evaluation activities, coordinated data collection, assisted in the creation of data collection instruments and statistical analysis, assisted in writing federal and state reports.

### Senior Associate / Senior Matters Consulting [1999-2000]

- Assisted clients with obtaining needed geriatric services and referrals in the community and performed duties to fulfill client contracts as necessary.

## **Program Coordinator and Administrative Residency / SC Department of Mental Health [1999]**

- Conducted study of recruitment and retention of nursing staff.

## **Graduate Research Assistant / USC School of Medicine [1998]**

- Assisted Radiology Department Chairperson with DOE-funded study of the health of former workers of the Savannah River Site.

## **Program Coordinator / SC Office of Rural Health [1997-98]**

- Worked closely with healthcare providers and social service providers to create an enhanced, cohesive service delivery system to reduce infant mortality.

## **Medical Policy Analyst / SC Workers' Compensation Commission [1996-97]**

- Participated in administration of physician payment system and development of DRG prospective payment system, working closely with the South Carolina Healthcare Association, South Carolina Medical Association, and other healthcare groups and insurance representatives.

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## **Publications and Presentations**

Paranal, Rachelle, Washington, Kiona, and Derrick, Christina (2012). Utilizing Online Training for Child Sexual Abuse Prevention: Benefits and Limitations. *Journal of Child Sexual Abuse*, 21 (5), 507-520.

Forrest, Cynthia and Derrick, Christina (2010) Interdisciplinary Education in End-of-Life Care: Creating New Opportunities for Social Work, Nursing, and Clinical Pastoral Education Students. *Journal of Social Work in End-Of-Life & Palliative Care*, 6 (1), 91-116.

Derrick, C.M. and Long, D. (2013). Building and Assessing Effective Partnerships. Presentation made at the National College Access Network Conference, Sept 16-18, 2013, Nashville, TN.

Derrick, C.M. (2005). Using the TOPS Logic Model to Evaluate an Independent Living Training Series. Poster presentation made at the National Human Services Training Evaluation Symposium, May 25-27, 2005, Berkeley, CA.

Derrick, C.M, and Privette, D. (2003). Getting to Third Base: Moving Beyond the Basics In Training Evaluation. Presentation made at the National Staff Development and Training Association Annual Conference, September 21-24, 2003, Anaheim, CA.

Philp, J. D., and Munro, C. M. (2001). Using Perceptual Maps to Evaluate a Teen Abstinence Education Program. Poster Presentation made at the American Evaluation Association Annual Conference, November 7-10, 2001, St. Louis, MO.

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## **Affiliations and Awards**

American Evaluation Association

WWC Group Training Certificate, 2019